

Section C: Page7

Question 8: Executive Summary of Project for BIP and BTOP

The **problem** of unavailable and unaffordable broadband service in Upstate New York is severe, subjecting rural communities to vast economic and quality of life disadvantages. New York is ready, ***shovel ready***, for true economic growth, but we have a huge weakness in the necessary infrastructure needed for that growth. The fact is that Upstate New York has no or limited access to large capacity inexpensive broadband. New York has reasonably priced real estate, an immense supply of inexpensive hydro power, an educated workforce, major underutilized highways and fully developed business parks throughout the state that are ready and waiting for businesses. It's time to invest in the companies that can bring forth the knowledge, commitment and expertise to overcome this crisis in New York. No longer can we afford to leave this issue governmentally unaddressed. It is time to look to the leaders in the broadband field and invest in the most well thought out, best designed plans, that reach the largest population of unserved and underserved communities. Only then will New York truly have a chance to compete in the economic recovery.

This application is being submitted by two highly revered and respected entities that already do and will continue to make a huge impact on the need for broadband. The two companies, a for-profit company ION, and Development Authority of the North Country (DANC), a public benefit corporation, have agreed to share their resources and knowledge of the upstate rural markets and develop a plan that goes above and beyond anything previously attempted in New York, to bring affordable and large capacity broadband into the rural areas. This application contains a well thought out, significantly supported, and cost effective **solution** to these problems. With this application ION, in partnership with DANC in the North Country, seek to improve broadband access conditions in communities that have no access or have limited or insufficient access to "middle mile" broadband; promote robust "middle mile" broadband access for essential state and local governmental services including, without limitation, public safety, health and education; promote increased availability of "last mile" services, and competition for broadband access and related services; and thus create conditions that will encourage economic competitiveness and growth throughout New York. For all of New York this means not only can ION/DANC, with its rural broadband network expertise start the projects immediately, but the projects will have an almost immediate impact on economic growth, job creation and enhancement of quality of life issues in New York State.

ION/DANC will provide and improve middle mile broadband service through the vast mostly rural geographic landscape of New York. In addition to enabling connectivity for other last mile networks and service providers, the proposed ION/DANC "open access" middle mile fiber backbone project includes direct connections **to over 100** strategic institutions and locations including: Libraries, Community Colleges, State University of New York (SUNY) sites, Department of Corrections (DOC) correctional facilities, county government buildings, the Griffiss Business & Technology Park, Health clinics, and NYS Mental Health locations. As well as bring 1,308 miles of "middle mile" infrastructure through more than 72 towns with a total population of 574,765, including 237,364 households, and 39,502 businesses which are all priority objectives for these stimulus funds. This project will encompass an extremely large portion of rural residents who lack access to broadband services in New York and some in parts of Vermont and Pennsylvania.

This infrastructure consists of a fiber topology arranged in 10 primary routes covering a majority of the rural areas of New York, and parts of Pennsylvania and Vermont. The general design of the ION/DANC middle mile transport systems, based on fiber optic DWDM transport and distribution, has potentially unlimited capacity and speed using modular chassis to support future growth. It also has the proven reliability, simplicity and cost effectiveness of Ethernet, which ION/DANC has deployed. This middle mile solution embraces the concept of a single infrastructure, supporting multiple access architectures to ensure that the infrastructure cost is not repeatedly spent as new access architectures and technologies are deployed.

ION/DANC will provide this middle mile infrastructure to support a multitude of end user service providers in a nondiscriminatory fashion. ION/DANC will provide inexpensive cross-connections and backhaul to other service providers at carrier hotels and the Verizon central offices in order to foster competition for these new market entrants. ION/DANC does not discriminate via pricing or service regardless of the provider type; CATV, PLC (power line communication) Providers, Wireless Carriers, Not for Profits, CLECs, ISPs etc....

These builds are described throughout accordingly:

Project 1: Southern Tier West Fiber Backbone - Whitesville to Jamestown

. ION in collaboration with Southern Tier West, Dunkirk-Fredonia Tel and Finger Lakes Technology Group propose a three county network, intend to commence with a 115 mile core fiber broadband backbone to be constructed and maintained by ION. DFT and FLTG will introduce voice and broadband services to schools/colleges, healthcare, government and businesses along this middle mile segment. This build will go through 10 towns with a total population of 81,448; it will pass 37,673 households and 5,063 businesses.

Project 2: Western New York Redundant Fiber Ring (via Armstrong Tel, Empire Tel and Frontier)

. ION in conjunction with Empire Telephone, Armstrong Telephone, and Frontier Communications propose construction of a 140-mile route protected fiber broadband backbone to connect Odessa, Prattsburg, Alfred, Almond and Naples, NY. Etc. This build will go through 11 towns, with a total population of 47,990; it will pass 20,749 households and 2,677 businesses.

Project 3: Chemung and Steuben County Fiber Backbone Network

. The Corning and Elmira areas of NY are vastly underserved with reliable and affordable broadband services. Regional Service Providers have expressed great interest in marketing their retail services and bringing competition to these areas. The route will also go through Painted Post, and connect to Corning Research and Development located there. Cellular providers have requested route protected fiber access from ION to their cell towers to better serve the territory. This build will go through 5 towns, with a total population of 65,825; it will pass 28,810 households and 4,564 businesses.

Project 4a: New York - VT/N. Hampshire Network Connectivity (Crown Point, NY to Burlington, VT)

Project 4b: New York - VT/N. Hampshire Network Connectivity
(Whitehall, NY to Rutland, VT)

. ION in collaboration with Sovernet Communications, a telecommunications company serving Northern New England with reliable telephone and critical broadband, need to construct fiber to connect the ION Upstate New York network to the Sovernet (OC-192) broadband backbone located in Vermont and Western NH. This build will expand the geographic reach and deliver services to other rural areas throughout this portion of New York State as well as secure redundant, reliable backbone for customers in Northern New England. The wireless providers AT&T (f/n/a Cingular) and Verizon Wireless are seeking access to this infrastructure to connect existing cell towers and newly created cell towers to Mobile Switching Centers across the three states of New York, Vermont, and New Hampshire. This build will go through 9 towns with a total population of 93,843; it will pass 40,193 households and 7,750 businesses.

Project 5: Herkimer and Oneida County Fiber Backbone Network

. The Utica and Herkimer areas of NY are vastly underserved with reliable and affordable broadband services as well. Regional RLEC's, CLEC's, and Wireless providers all need redundant and affordable fiber broadband access to these areas to better serve their customers and the overall territory. This build will go through 5 towns, with a total population of 90,644; it will pass 42,428 households and 4,657 businesses.

Project 6: ION and DANC - North Country Route Protection (Boonville to Holland Patent)

Project 6a: Lateral Link to NY Power Authority and SUNY Institute of Technology

Project 6b: Lateral Link to Griffiss Business Park (need Internet 2 for Department of Defense)

Project 6c: Lateral Links to Strategic Institutions

. ION in collaboration with DANC will construct the proposed route, which provides government (Ft Drum), cellular, business, and service provider customers (TDS Telecom) the benefits of a route protection. It will also allow the hundreds of other businesses in the area to be better served. This build will go through 5 towns with a total population of 12,334; it will pass 5,773 households and 1,081 businesses.

Project 7: New York - Pennsylvania Fiber Network Redundant Route via (3) PA Telephone Companies

. ION will construct fiber from an owner company (Hancock Telephone) thru Port Jervis and onto Monroe, NY. The fiber route goes through Lackawaxen, South Canaan, and North Eastern Pennsylvania Telephone Companies. This fiber build will provide ION with additional route protection from the Binghamton, New York area. This will give these three rural RLECs access to more affordable Broadband Infrastructure for their telephone and DSL subscribers more reliable services for their cellular customers, and geographic route protection (redundancy) out of their rural territories. This build will go through 9 towns with a total population of 62,477; it will pass 21,913 households and 4,469 businesses.

Project 8: North Country Broadband Backbone (Massena to Plattsburgh)

. DANC will construct a network from Hogsburg, NY to Plattsburgh, NY that effectively completes a redundant ring across the northern part of the state. These connections will allow DANC and their current customers to have available much needed route redundancy in the northern part of the state. It will also provide robust new service availability to the towns and

institutions it goes through.. This build will go through towns with a total population of 41,123; it will pass 19,107 households and 2323 businesses.

Project 9: Southern Tier East Fiber Backbone - 7 Community Network

. ION will construct a fiber broadband backbone network across a seven county area; starting from ION's Dryden network POP and ending up at the ION network POP in Middleburgh. These counties and the areas within them are vastly under and un-served, and the ION fiber network will provide affordable and reliable broadband access for the creation of new services in these rural areas. The route will be connected to and intends to serve the multiple SUNY colleges located in Cobleskill, Morrisville, Oneonta, and Cortland. This build will go through 14 towns with a total population of 86,593; it will pass 34,834 households and 5,854 businesses.

Project 10: Osgewatchie, Star Lake, Lake Placid, Elizabethtown, Westport Fiber Backbone -

. This DANC portion of the Adirondack build is to get to these towns and villages as well as the strategic entities that are there.

Project 10a: Lateral Links to Strategic Institutions -

. Dept of Corrections, Healthcare, Education, and County Government associated with their builds.

Project 10b: Lateral Links to Maximum Security Prisons (Department of Corrections)

For residents in rural New York, change cannot come soon enough. Without ION/DANC providing the “middle mile” infrastructure, New York will leave hundreds of thousands of residents behind, stuck with slow broadband at unaffordable prices or none at all. The Last Mile providers absolutely need the ION/DANC “middle mile” infrastructure to reach the remote and rural communities that make up most of upstate New York.